LA-UR-11-11050
Approved for public release; distribution is unlimited.

Title:	Course #56106: TA-53 Horizontal Band Saw Operation OJT
Author(s):	Womack, Todd
Intended for:	Job Specific Training at TA-53

Los Alamos NATIONAL LABORATORY EST. 1943

OJT Course Guides
Instructor/Trainee/Evaluator
CT-LANL-ISD-433-R00

Organization Name
P-25: Sub Atomic Physics

OJT Course Title
TA-53 Horizontal Band Saw Operation OJT

OJT Course Number
56106

Revision Number
0.0

Developer	Brian Martinez (Z #122252) **Training Specialist**	**Signature**	July 14, 2011 **Date**
Subject Matter Review	Todd Womack (Z# 151579) **Subject Matter Expert**	**Signature**	July 14, 2011 **Date**
Approval	Scott Wilburn (Z #120404) **P-25 Group Leader/Deputy**	**Signature**	July 14, 2011 **Date**
Approval	Meghan Keresey (Z #138800) **LANSCE Training Manager**	**Signature**	July 14, 2011 **Date**

DUSA Classifier Name (*print*) Brian Martinez	**Signature**	☒ **Unclassified** **DUSA:** **ADTO/TRNG**
Z# 122252	**Date** July 14, 2011	
NOTE:		

Revision Log

Rev No.	Date	Description of Change
0	March, 2011	Initial Release; OJT evaluation tasks and steps checklist for authorized users of the Horizontal Band Saw at TA-53. This document contains instructions and templates for all three OJT training roles: Instructor, Trainee, and Evaluator. • Section 1, the ***OJT Instructor Guide*** (P.2), provides information for developing and teaching OJT. • Section 2, the ***OJT Trainee Guide*** (P.7), contains everything a trainee needs to prepare for training and evaluation. • Section 3, the ***OJT Evaluator Guide*** (P. 18), provides a checklist with rules and guidelines to properly evaluate a trainee.

Section 1: *OJT Instructor Guide*

This *OJT Instructor Guide* provides all the information you need in order to understand the following:

- OJT Instructor and Evaluator Qualifications
- OJT Instruction Checklist
- OJT Lesson Plan

It is recommended that you review this *OJT Instructor Guide* prior to delivering the on-the-job (OJT) training to gain familiarity with instructor requirements and the delivery and evaluation requirements set forth in the lesson plan.

OJT Instructor and Evaluator Qualifications

1. OJT Instructors and Evaluators must meet the following criteria:
   - Be an SME in the tasks to be trained or evaluated (See attached *Training Package Form*)
   - Qualified on those tasks
   - Completed TSQP: OJT Instructor/Evaluator training requirements

2. SMEs cannot develop OJT instructional material unless they meet one of the two requirements below:
   - They have completed the appropriate instructional TSQP development courses, or
   - A qualified training specialist or training manager reviews and signs off on their material

3. An OJT Instructor/Evaluator is limited to training/evaluating no more than three trainees at a time.

OJT Instruction Checklist

☐ Complete attached *Training Package Form* for Instructor/Evaluator authorization (If not already on file with the Training Office).

☐ Review LANL P781-1: 3.2.7.e 'Supervision of OJT'; 3.2.7.f 'Suspension of OJT and Emergency Actions'; 3.2.7.g 'OJT Trainee-to-Instructor Ratios'.

☐ Provide information for items that are **[bold inside brackets]**, including the header and titles, throughout these Guides.

☐ Develop an *OJT Trainee Guide*.
   - Develop training in accordance with Integrated Safety Management Systems (ISMS) as well as appropriate procedures and related documents.

- When you have a critical or safety-related performance task step, you must write "(Critical)" or "(Safety)" next to the step. **Example: Step 3: (Critical) Light the boiler**.
  A critical step in a performance demonstration may, if incorrectly performed or performed in the wrong order
  - cause personnel injury or a safety issue
  - result in equipment damage or have a Technical Safety Requirement (TSR) impact
  - require significant recovery time

☐ Make a copy of the OJT ***Trainee Guide*** (Section 2 of this document) which is designed to be **a separate companion document**. You will give the trainee one copy of the "Trainee Guide" document and retain your Instructor and Evaluator Guides for the instruction piece and final evaluation/signoffs. The **Evaluator Guide** contains the acceptable responses and/or performance actions in the form of a checklist. **Do not** allow the trainee access to Section 3 of this document.

☐ Complete an OJT Lesson Plan template (in the next section).

☐ Provide an OJT *Trainee Version* companion document to a trainee. Tell the trainee to contact an Instructor to arrange training, ***after*** studying the contents of the Guide.

☐ Prior to training, at the Plan-of-the-Day (POD) meeting (if applicable), list and get approval for all facility training activities.

☐ Prior to training, ensure that each participant has completed all prerequisites (in the *OJT Trainee Guide*) and is personally ready for this training.

☐ Instruct the trainee in accordance with the OJT *Lesson Plan*.

☐ When the trainee indicates that he/she is ready to be evaluated, arrange time with an Evaluator and the trainee. Note that it is highly preferable, but not required for the Instructor and Evaluator to be different people.

☐ Complete the Instructor portion of the Signature Approvals page (p. 26).

OJT Lesson Plan

The Lesson Plan itself is divided into three training sections: introduction, body, and conclusion. Ensure that you cover all material in the order indicated, and remember to review and apply the training techniques that you learned during your TSQP instruction. During training, you can say the

italicized wording *verbatim* or use similar wording that is more natural to you. In addition, remember to provide information for items that are **[bold and inside brackets].**

❖ Introduction

a. Introduce yourself. Identify today's training schedule (including breaks), safety and security-related information, and location of restrooms. Set trainees at ease.
b. *Does everyone have his or her OJT Trainee Guide? Refer to the "Task Performance Steps OJT Checklist" section in your Guide. Today we will be learning these tasks.* Read the tasks out loud (no steps). *In addition, we will go over the safety and knowledge questions. Does everyone see where these are? What equipment, PPE, etc., do you need for this training?* Let trainees find this information. Ensure that trainees have the items in the "PPE, Equipment, and Training Aids" section with them for the training.
c. *You need to ask any and all questions that you have. I will also provide lots of coaching. If you feel you need more coaching – or you want to look up information in any procedures or reference material—please let me know.*
d. *Before we get started, I need to understand what your previous knowledge and experiences are in relation to the task(s) we are learning today.* Ask trainees questions and keep them talking until you understand the level of your trainees' needs. Remember to solicit the information they may know from them as you train. They may also be able to help each other with what they know (ensure it is correct).
e. *Why might this training be helpful to you?* Listen to their responses. **[Supplement with other possible motivations here.]**
f. *What questions do you have before we begin the actual training?*

❖ Body

a. Ask trainees to turn to the page in their *OJT Trainee* Guide that lists the objectives. Review each objective to ensure understanding. Ask if they have any other objectives they wish to achieve. If they do, incorporate them, if possible, or suggest other courses.
b. Verify that trainees have read and reviewed safety and knowledge questions and issues. Ask trainees an assortment of questions now and throughout training to check their understanding. Ask all required questions sometime during training.
c. Provide "what if" scenarios to cover safety/emergency situations and trainee responses. **[Write scenarios here or on another page for use as a training aid.]**
d. Identify at least one lesson learned that is relevant or similar to the OJT; review it with the trainees. **[Write relevant lessons learned here.]**

   Identifier: *(insert applicable lessons learned)*
   Date:

   Title:

   Statement:

   Discussion:

e. Describe how you will conduct the performance training (demonstrate doing the task, have trainees practice the task while you coach them, watch and question them to ensure proper performance).
f. Conduct task performance training. Remember that trainees may be visual, auditory, or kinesthetic learners, so adjust your demonstration and coaching to meet their needs. Throughout this process, also remember to provide constructive feedback. Continue training until the trainee determines that he/she has learned the performance task.
g. *What questions do you have about what you are expected to know or do?*

❖ Conclusion

a. Ask trainees to answer an assortment of safety, knowledge, and task performance questions; remediate incorrect answers.
b. Re-read each objective and ask trainees to supply what they have learned to satisfy that objective. Ask if they need more to satisfy it.
c. If necessary, demonstrate task(s) again and allow trainees further practice.
d. Review evaluation criteria with trainees.
e. Inform the trainee whom to contact when they are ready to be evaluated.
f. Praise trainee for successfully completing training, encourage him/her to concentrate on weaker areas, and motivate further.
g. After a trainee successfully completes training, fill out the Instructor's signature block in your *Signature Approvals* page of the *OJT Evaluator Guide (p. 26)*. Give your copy of the *OJT Trainee Guide* to the Evaluator for signoff on the evaluation portion of the training.
h. **Ask trainees to complete the attached *OJT Course Evaluation* found in the Trainee Guide *(p. 17) at the conclusion of the instruction*.**
i. Turn in completed course evaluations to the LANSCE Training Office.

Section 2: *OJT Trainee Guide*

NOTE: Photo copy and issue this section of the document to the trainee.

This *OJT Trainee Guide* provides all the information you need in order to understand the following:

- Prerequisites
- The OJT Instruction and Evaluation Process
- PPE, Equipment, and Training Aids
- Objectives (what you will know or be able to do)
- Safety and Knowledge Questions
- Task Performance Steps (with available notes section)

It is recommended that you review this *OJT Trainee Guide* prior to receiving the on-the-job (OJT) instruction to gain familiarity with the OJT instruction and evaluation process.

Prerequisites

Prior to this training, you must have successfully completed the following training requirements:

Prerequisites for Training	
Knowledge, skills or abilities	-Knowledge of Horizontal Band Saw operations and theories, LANL IWD and shop operations. -Ability to lift and carry material weighing up to forty (40) pounds for short distances.
Training Plans Assigned	-TA-53 Self Study; Building Emergency Plan Program (BEPP)
Required Reading	-Latest version of applicable LANL IWD for TA-53 Horizontal Band Saw Operations. -OJT Trainee Guide (Section 2) -Model SE-912 Instruction Manual

If you have ***not*** met these prerequisites, notify your Supervisor and Training Coordinator, and complete the prerequisites.

The OJT Instruction and Evaluation Process

An instructor will provide you with an OJT Trainee Guide for each OJT lesson. Before starting your instruction, you must read the remainder of this *OJT Trainee Guide*. Write down any questions that you have and bring them to the OJT training session.

During the instruction process, the suggestions below will help you succeed in learning the material.

- Ask your Instructor questions in order to understand what you need to learn. When in doubt, ask!
- Ask for coaching and repeated demonstrations at any time during your instruction.
- Bring your *OJT Trainee Guide* to training sessions and refer to performance steps, safety and knowledge questions, and other related information as often as you like.
- Practice all performance activities for as long as you need to, until you feel comfortable doing the tasks.

- Ensure that you know and understand all the safety and knowledge questions in your *OJT Trainee Guide*. You will be asked these questions ***verbatim*** during your evaluation.

Note:

You must answer all SAFETY related questions with 100% accuracy.

During your evaluation, the following rules apply:

- You may use your reference materials (such as procedures) during the evaluation, but you may ***not*** use your *OJT Trainee Guide.*
- The Evaluator cannot answer any questions or coach you.
- Perform each task in accordance with the appropriate training/reference materials.
- In the event any problems arise beyond your knowledge and skills, step back and allow the Evaluator to take control.
- Your performance criteria are as follows:
  - Failing to respond correctly to a safety-related question is an automatic failure of this evaluation. Safety questions require 100% accuracy.
  - You must successfully respond to all 'knowledge' questions with 80% accuracy or better.
  - Incorrectly performing any critical step or three (3) non-critical steps constitutes a failure of this evaluation.
- The OJT Evaluator ***must*** record any error serious enough to warrant discontinuing the training session or a failure of a critical task/step evaluation. The Evaluator will use an *Unsatisfactory OJT Evaluation with Remediation Steps Form* to document your error(s) in the task(s) you failed to perform satisfactorily and to document any remediation that took place.

PPE, EQUIPMENT, TRAINING AIDS

Bring the following to your training sessions:

- Facility required personal protective equipment (PPE) to include steel toed boots or shoes, hear protection and eye protection.
- This OJT Training Package
- The Model SE-912 Instruction Manual
- Copy of the latest version of the LANL IWD for TA-53 Bldg. 39 titled "Machine Shop/Hand Tools".
- Know where to reference the Blade Speed Guide and the *Tell Tale Chips Guide.*
- Sharpie Markers to mark the material to be cut.

OBJECTIVES AND THEIR (SOURCES)

This training is required for Laboratory personnel who operate the Horizontal Band Saw, in accordance with manufacturer recommendations and established shop procedures for its use.

Before proceeding with the demonstration and performance evaluation, it is important to ensure that trainees understand what is expected of them by defining the learning objectives for the training in terms of terminal and enabling objectives. Terminal objectives (TO) clearly indicate the overall knowledge and skill elements addressed in this training package. They define what the trainee should know upon completion of this training. Enabling objectives (EO) are actions demonstrated to the trainee during this training that are elemental components of the terminal objectives. This training reflects work under **normal working conditions** only.

At the end of this training, you will know and be able to perform the following (TO):

- Employ safe work practices and engineering controls as you setup, operate and shut down the Horizontal Band Saw.

During this on-the-job training, trainees will (EO):

1. Answer safety questions correctly with 100% accuracy.
2. Answer knowledge questions correctly with 80% accuracy or better.
3. Set up, operate and shut down the Horizontal Band Saw.
4. Know machine-specific hazards, device use principles and techniques.
5. Apply engineered and administrative safety controls while performing work safely.

[**NOTE:** Achieving full proficiency in these objectives may require retraining, additional practice, and/or re-evaluation. In the event that a lack of proficiency results in safety issues, the Evaluator may choose to postpone the evaluation process until the Trainee achieves and can demonstrate the required proficiency.]

TA-53 Horizontal Band Saw
OJT Task Performance Steps Checklist

NOTE: This document **is not** the formal OJT Evaluation Checklist to be used by the Evaluator. The Evaluation Checklist may be found in Section 3 of the Instructor/Evaluator Version of this OJT.

CAUTION:

DO NOT ALLOW THE TRAINEE TO MAKE AN ERROR THAT WOULD PUT PERSONNEL, EQUIPMENT, THE ENVIRONMENT, SECURITY, OR THE FACILITY IN JEOPARDY AT ANY TIME DURING THIS EVALUATION.

Perform each task in accordance with manufacturer and established shop procedures. Performance is a preferred method of evaluation; however, if performance is not possible a simulation is acceptable.

Worker must successfully respond to **80%, or better**, of all 'knowledge' questions and correctly perform all 'Critical Tasks' or Steps (highlighted in blue fields) with 100% accuracy. **Failing to correctly respond to a *safety related* knowledge question is an automatic failure of this evaluation**. Additionally, incorrectly performing any single critical step or three (3) non-critical steps constitutes a failure of this evaluation.

Any error serious enough to warrant discontinuing the training session or failure of the evaluation **MUST** be recorded in detail in the *Unsatisfactory OJT Evaluation with Remediation Steps Form* provided at the end of this evaluation document.

Key: **Critical steps are noted in blue field.**	
SAFETY QUESTIONS: **Task: Demonstrate an Understanding of Proper Machine Operating Practices**	**Trainee Notes**
1. [Sub-task Question] What is the greatest safety hazard when using the Horizontal Band Saw? **[Acceptable Response]**	
2. [Sub-Task Question] What should be done when a blade is dull or breaks? **[Acceptable Response]**	
3. [Sub-Task Question] How do you ensure that power is secured to the Horizontal Band Saw? **[Acceptable Response]**	
4. [Sub-Task Question] What is the purpose of the wax during cutting operations? **[Acceptable Response]**	
5. [Sub-Task Question] The machine has an engineered torque motor	

protection switch. If engaged, how many times can you reset the machine before you must contact the Shop Custodian? **[Acceptable Response]**	
KNOWLEDGE QUESTIONS: **Task: Demonstrate General Awareness Level Knowledge of Simple Machine Usage Considerations**	**Trainee Notes**
1. [Sub-task Question] What is the purpose of the Horizontal Band Saw? **Critical Task** **[Acceptable Response]**	
2. [Sub-task Question] When will a user of the Horizontal Band Saw be issued a key to the administrative control lock for the machine? **[Acceptable Response]**	
3. [Sub-task Question] What type of material must never be cut with the Horizontal Band Saw? **Critical Task** **[Acceptable Response]**	

Preparation and Set Up (BEGIN)	
TASK PERFORMANCE STEPS:	**Trainee Notes**
Task: Apply Safe Work Practices and Engineering Controls While Conducting a Safety Inspection **Subtask [#1: Conduct pre-job cursory safety inspection of the machine.]**	
Step 1: The Operator ensures the unit power cord **is not** connected to the A/C power receptacle and the red power button labeled "Stop" is depressed. **Critical Step**	
Step 2: The Operator visually inspect the Horizontal Band Saw and work area for damage, defects, and excessive dust or debris. [Ensures the unit is not connected to A/C power and the red power switch labeled "Stop" is depressed.] **Critical Step**	
Step 3: If the Operator identifies issues in Step 2 such as damage or defects, the Operator will immediately notifies the Shop Custodian. Otherwise, the Operator removes the excessive dust and debris and disposes in the proper receptacle as per shop rules. **Critical Step**	
TASK PERFORMANCE STEPS:	**Trainee Notes**
Task: Apply Safe Work Practices and Engineering Controls While Performing Equipment Setup **Subtask [#2: Test Emergency Stop Button.]**	

Step 1: The Operator locates A/C power cord: removes the administrative lock and connects power cord to wall receptacle.	
Step 2: The Operator locates the green 'ON' power button and depresses it. The machine is energized; the Operator notes the position, the noise and the rotation of the rotary blade.	
Step 3: The Operator then depresses 'EMERGENCY STOP' button and notes that rotation of the rotary blade (stops rotating). [**Note:** Since this machine is the only shop unit with this safety feature, the Trainee must understand its importance prior to the final evaluation.]	
Step 4: If the 'EMERGENCY STOP' is not operational (e.g. the blade continues to spin), the Operator will depress the 'OFF' button, unplug the machine, apply the administrative control lock and contact the Shop Custodian. [If this step does not apply, simulate accomplishing this step.] **Critical Step**	
Step 5: After determining the readiness of the 'EMERGENCY STOP' knob. The Operator powers 'OFF' the unit by depressing the red power button and resetting the 'EMERGENCY STOP' knob. The Operator locates A/C power cord and disconnects power cord from the A/C wall receptacle.	
TASK PERFORMANCE STEPS:	**Trainee Notes**
Task: Apply Work Practices and Engineering Controls While Performing Equipment Setup Subtask [#3.Set the Blade Speed.] Critical Task/Best Business Practice	
Step 1: The Operator locates A/C power cord and verifies the power cord is disconnected from the A/C wall receptacle. The Operator will maintain "Plug Control" during the process of setting the blade. **Critical Step**	
Step 2: The Operator determines the type of metal to be cut and reviews the *Blade Speed Guide*.	
Step 3: The Operator opens the pulley guard cover, adjusts speed by moving belt to appropriate pulleys identified in the *Blade Speed Guide*, and then closes and secures the pulley guard cover.	
Step 4: The Operator locates A/C power cord and connects to the A/C wall receptacle. The Operator then depresses the green 'ON' button. The machine is energized; the Operator notes the position, the noise and the rotation of the rotary blade.	

Step 5: If abnormal noise or vibration occurs the Operator will depress the red 'OFF' button, unplug the machine, apply the administrative control lock and contact the Shop Custodian. Otherwise, the Operator will depress the red 'Off' power button and unplug the machine. [If this step does not apply, simulate accomplishing this step.] **Critical Step**	
TASK PERFORMANCE STEPS:	**Trainee Notes**
Task: Apply Safe Engineering Controls and Work Practices While Performing Equipment Setup **Subtask [#4: Securely mount the stock and set the blade guard.]**	
Step 1: The Operator locates A/C power cord and verifies the power cord is disconnected from the wall receptacle. The Operator will maintain "Plug Control" during the process of mounting the stock and setting the blade guard. **Critical Step**	
Step 2: The Operator lifts open the cutting arm and closes the feed rate valve; locking the cutting arm open.	
Step 3: The Operator obtains the stock to be cut and places it appropriately in the machine vise ensuring proper tension is applied and that extra stock supports are in place when cutting long stock.	
Step 4: The Operator may notice that short lengths of material may not clamp in vise, ensures that the material to be sawed is indeed securely clamped. [**NOTE**: Movable jaw may pivot at screw attachment; Material may only be secured by shimming far side of vise.]	
Step 5: The Operator opens the feed rate valve and lowers cutting arm blade (with the machine 'OFF') to just above stock surface and checks the length of cut off portion needed. [Repositions and re-secures in vice if necessary.] **Critical Step**	
Step 6: The Operator then adjusts the blade guards so that only the length of blade needed to cut off stock is exposed allowing for the width of the wax stick if it is to be used. **Critical Step**	
Step 7: The Operator lifts open the cutting arm and closes the feed rate valve; locking the cutting arm open.	
Preparation and Set Up (END)	
Operation (BEGIN)	
TASK PERFORMANCE STEPS:	**Trainee Notes**
Task: Apply Safe Engineering Controls and Work Practices While Operating the Equipment **Subtask [#5: Cut the initial 'kerf' and set the feed.]**	

Subtask [#5: Cut the initial 'kerf' and set the feed.]	
Step 1: The Operator locates A/C power cord and connects to wall receptacle. The Operator then depresses the green 'ON' button. The machine is energized; the Operator notes the position, the noise and the rotation of the rotary blade.	
Step 2: The Operator turns the *Lubricating Fluid Switch* to the 'ON' position (green) or waxes the blade. [The red coolant valve must be opened.]	
Step 3: The Operator opens the feed rate valve and slowly lowers the cutting arm blade to begin cutting the "kerf" which aids in maintaining the path of subsequent sawing operation. **Critical Step**	
Step 4: The Operator ensures that sufficient pressure is applied to the cutting arm blade so that teeth rub rather than cut and in so doing create excessive wear. [References the *Tell Tale Chips Guide* posted next to the machine] **Critical Step**	
Step 5: Once the 'kerf' is established the operator raises the cutting arm blade, shuts the feed rate valve and depresses the red 'Off' button.	
Step 6: The Operator then stets the feed rate utilizing the feed rate adjustment knob and the feed rate valve on the feed piston.	
TASK PERFORMANCE STEPS:	**Trainee Notes**
Task: Apply Safe Engineering Controls and Work Practices While Operating the Equipment **Subtask [#6: Cut the stock.]**	
Step 1: The Operator locates the green 'ON' button and depresses it. The machine is energized; the Operator notes the position, the noise and the rotation of the rotary blade.	
Step 2: The Operator either lubricates the blade with wax or locates the *Lubricating Fluid Switch* on the front panel and places it in the 'ON' position (green).	
Step 3: The Operator opens the feed rate valve and the cutting arm begins to advance the blade gently into the stock.	

Step 4: The Operator ensures the lubricating system operates properly or applies wax lubricant as necessary during the entire cutting process. **Critical Step**	
Step 5: The Operator watches the cutting process and never leaves the process unattended. **Critical Step**	
TASK PERFORMANCE STEPS:	**Trainee Notes**
Task: Apply Safe Engineering Controls and Work Practices while Powering Down the Equipment Subtask [#7: Power 'OFF' the machine and the coolant mechanism, remove the cut stock.]	
Step 1: The Operator notes completion of the cut and ensures that coolant switch is turned to the 'OFF' position (red).	
Step 2: The Operator will depress the 'OFF' button (red), note the position, the noise and the rotation of the rotary blade.	
Step 3: The Operator locates the A/C power supply cord, unplugs it from the A/C wall receptacle.	
Step 4: The Operator lifts open the cutting arm and closes the feed rate valve; locking the cutting arm open.	
Step 5: The Operator removes the stock from the horizontal band saw.	
Operation (END)	

Post Operation (BEGIN)	
TASK PERFORMANCE STEPS:	**Trainee Notes**
Task: Apply Safe Engineering Controls and Work Practices While Conducting a Safety Inspection **Subtask [#8: Work is Complete. Conduct a post-job cursory safety inspection and properly dispose of generated waste.]**	
Step 1: The Operator ensures the unit power cord is not connected to the A/C power receptacle, the red 'STOP' power button is depressed and the administrative control lock is applied. **Critical Step**	
Step 2: The Operator opens the feed rate valve and slowly lowers the cutting arm blade to its 'stored' position.	
Step 3: The Operator visually inspects the Horizontal Band Saw for damage, defects, and excessive dust or debris. **Critical Step**	
Step 4: If issues are identified in Step 2 such as damage or defects, immediately notify the Shop Custodian. Otherwise, remove the excessive dust and debris and dispose of as per shop rules. **Critical Step**	
Step 5: The Operator brushes off the Horizontal Band Saw and cooling collection tray blade, guide supports, etc.	
Step 6: The Operator ensures that the Horizontal Band Saw is in a ready use state.	
Step 7: The Operator ensures the work area is clear of debris or other hazards, sweeps floor and disposes of chips and excess materials per shop rules.	
Post Operation (END)	

Trainee Evaluation of OJT Instruction and Evaluation

Please take the time to complete the following course evaluation after you have completed the OJT performance evaluation. Your feedback is important to assist us with the effectiveness of this course.

NAME (optional):	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
1. This OJT was a good use of my time.	☐	☐	☐	☐	☐
2. This OJT will enable me to perform this task safely and correctly.	☐	☐	☐	☐	☐
3. The learning objectives found in this OJT were appropriate to the task being trained.	☐	☐	☐	☐	☐
4. The performance evaluation portion of this OJT was effective at measuring how much I learned during the instructional portion of the OJT.	☐	☐	☐	☐	☐
5. Rate your level of knowledge:	**Low**				**High**
Before the OJT instruction and evaluation	☐	☐	☐	☐	☐
After the OJT instruction and evaluation	☐	☐	☐	☐	☐

If you marked "Disagree" or "Strongly Disagree" to any of the above, please let us know why (in detail):
What changes would you recommend to make to this OJT course more effective?

Return completed Course Evaluation to Instructor/Evaluator.

Section 3: *OJT Evaluator Guide*

This *OJT Evaluator Guide* provides all the information you need in order to understand the following:

- Instructions to the OJT Evaluator
- Evaluation criteria
- *Unsatisfactory OJT Evaluation with Remediation Steps* form

It is recommended that you review this *OJT Evaluator Guide* prior to conducting the on-the-job (OJT) evaluation to gain familiarity with the OJT evaluation requirements and evaluation criteria.

Instructions to the OJT Evaluator

CAUTION:

DO NOT ALLOW TRAINEE TO MAKE AN ERROR THAT WOULD PUT PERSONNEL, EQUIPMENT, THE ENVIRONMENT, OR THE FACILITY IN JEOPARDY AT ANY TIME DURING THIS EVALUATION.

Check when completed:

☐ Complete attached *Training Package Form* for Instructor/Evaluator authorization (If not already on file with the Training Office).

☐ Review LANL P781-1: 3.2.7.e 'Supervision of OJT'; 3.2.7.f 'Suspension of OJT and Emergency Actions'; 3.2.7.g.

☐ Review evaluation rules with the trainee, and ask if there are any questions before beginning the evaluation.

☐ During the evaluation do not allow the worker to ask questions; do not coach the worker in any way. The worker may consult reference materials (***except*** the *OJT Trainee Guide*) at any time during the performance evaluation but may not ask you to clarify on any task or item.

NOTE:

The Evaluator may require the Trainee to talk through a performance step before performing it. The Evaluator must take care not to agree or disagree with the trainee's statements; this would be coaching. However, an exact repeat-back is not coaching.

☐ During the performance evaluation, ask safety and knowledge questions ***verbatim***. Evaluate only knowledge and safety questions, as well as performance steps, that are included in the *OJT Trainee Guide*.

☐ Use the **OJT Evaluation Performance Checklist** in Section 2. Write the trainee's name and Z-Number where indicated. As a trainee responds/performs acceptably to a question or performance task, write your initials in the "Pass" column and date it. When every item is a "Pass," submit the completed Training Package to your Training Coordinator.

☐ If a trainee fails to answer safety/knowledge questions or performs tasks/subtasks improperly, write your initials in the "Fail" column and date it. For all failures, you must complete the *Unsatisfactory OJT Evaluation with Unsatisfactory OJT Evaluation with Remediation Steps Form* (page 28) and submit it to the Instructor(s) as well as to your Training Coordinator for recordkeeping purposes.

☐ Complete the Evaluator portion of the Signature Approvals page (p. 26). In addition, ensure that Trainee signs his section.

☐ Submit the completed course evaluations and the **Signature Approvals** page (p. 26) to the LANSCE Training Coordinator.

Evaluation Criteria

Evaluate the Trainee using the criteria below.

- If a trainee responds incorrectly to a safety-related question it is an automatic failure of this evaluation. **Safety questions require 100% accuracy**.
- The trainee must successfully respond to all knowledge questions with 80% or better accuracy.
- Incorrectly ***performing*** one (1) critical step or three (3) non-critical steps constitutes a failure of this evaluation. A **critical step** (highlighted in blue field) in a performance demonstration is defined as a step that, if incorrectly performed or performed in the wrong order, may cause the following: personnel injury or a safety issue; equipment damage and/or significant recovery time.
- Any error serious enough to warrant discontinuing the training session or failure of the evaluation **MUST** be recorded in detail in the *Unsatisfactory OJT Evaluation with Remediation Steps Form* provided at the end of this evaluation document.
- Since the tasks performed are actively monitored by the Evaluator, in the event the Trainee missed a non-critical step or a knowledge question is answered incorrectly, remediation may take place immediately as long as it is documented on the *Unsatisfactory OJT Evaluation with Remediation Steps Form*.

TA-53 Horizontal Band Saw
OJT Performance Evaluation Checklist

Trainee Name, Z-Number, Date

Key: Critical Steps are noted in blue field.

SAFETY QUESTIONS:	***SAT/UNSAT**
1. [Question] What is the greatest safety hazard when using the Horizontal Band Saw? **[Acceptable Response]** Nearness of the hands to the blade and accidental contact with moving blade.	SAT UNSAT
2. [Question] What should be done when a blade is dull or breaks? **[Acceptable Response]** Depress the 'OFF' button, unplug the machine, apply the administrative control lock, remove the stock, and contact the Shop Custodian.	SAT UNSAT
3. [Question] How do you ensure that power is secured to the Horizontal Band Saw? **[Acceptable Response]** The Horizontal Band Saw A/C power cord should not be connected to the A/C wall receptacle.	SAT UNSAT
4. [Question] What is the purpose of the wax during cutting operations? **[Acceptable Response]** The wax is applied during operation in order to provide a lubricant for the blade. This is often used on vacuum components since the coolant can flow into areas where it is impossible to remove the coolant and thus contaminates the vacuum parts.	SAT UNSAT
5. [Question] The machine has an engineered torque motor protection switch. If engaged, how many times can you reset the machine before you must contact the Shop Custodian? **[Acceptable Response]** Once or one time.	SAT UNSAT
	*Initial the result.
KNOWLEDGE QUESTIONS:	***SAT/UNSAT**
1. [Question] What is the purpose of the Horizontal Band Saw? **[Acceptable Response]** Reduction of stock to near net desired shape.	SAT UNSAT
2. [Question] When will a user of the Horizontal Band Saw be issue a key to the administrative control lock for the machine? **[Acceptable Response]** Upon completion of the OJT training, review and signage of the existing IWD and upon approval of line management.	SAT UNSAT
3. [Question] What type of material must never be cut with the Horizontal Band Saw? **[Acceptable Response]** Radioactive or source material and any material not listed in the IWD.	SAT UNSAT
	*Initial the result.

PERFORMANCE:	
Preparation and Set Up (BEGIN)	
TASK PERFORMANCE STEPS:	***SAT/UNSAT**
Task: Apply Safe Work Practices and Engineering Controls While Conducting a Safety Inspection **Subtask [#1: Conduct pre-job cursory safety inspection of the machine.]**	
Step 1: The Operator ensures the unit power cord **is not** connected to the A/C power receptacle and the red power button labeled "Stop" is depressed.	SAT UNSAT
Step 2: The Operator visually inspect the Horizontal Band Saw and work area for damage, defects, and excessive dust or debris. [Ensures the unit is not connected to A/C power and the red power switch labeled "Stop" is depressed.]	SAT UNSAT
Step 3: If the Operator identifies issues in Step 2 such as damage or defects, the Operator will immediately notifies the Shop Custodian. Otherwise, the Operator removes the excessive dust and debris and disposes in the proper receptacle as per shop rules.	SAT UNSAT
	*Initial the result.
TASK PERFORMANCE STEPS:	***SAT/UNSAT**
Task: Apply Safe Engineering Controls and Work Practices While Performing Equipment Setup **Subtask [#2: Test Emergency Stop Button.]**	
Step 1: The Operator locates A/C power cord: removes the administrative lock and connects power cord to wall receptacle.	SAT UNSAT
Step 2: The Operator locates the green 'ON' power button and depresses it. The machine is energized; the Operator notes the position, the noise and the rotation of the rotary blade.	SAT UNSAT
Step 3: The Operator then depresses 'EMERGENCY STOP' button and notes that rotation of the rotary blade (stops rotating). [Since this machine is the only shop unit with this safety feature, the Instructor must ensure that the trainee understands its importance prior to the final evaluation.]	SAT UNSAT
Step 4: If the 'EMERGENCY STOP' is not operational (e.g. the blade continues to spin), the Operator will depress the 'OFF' button, unplug the machine, apply the administrative control lock and contact the Shop Custodian. [Evaluator, if this step does not apply the Trainee may simulate, credit should otherwise be given for accomplishing this step.] **Critical Step**	SAT UNSAT
Step 5: After determining the readiness of the 'EMERGENCY STOP' knob. The Operator powers 'OFF' the unit by depressing the red power button and resetting the 'EMERGENCY STOP' knob. The Operator locates A/C power cord and disconnects power cord from the A/C wall receptacle.	SAT UNSAT
	*Initial the result.
TASK PERFORMANCE STEPS:	***SAT/UNSAT**
Task: Apply Safe Engineering Controls and Work Practices While Performing Equipment Setup **Subtask [#3.Set the Blade Speed.]**	

Step 1: The Operator locates A/C power cord and verifies the power cord is disconnected from the A/C wall receptacle. The Operator will maintain "Plug Control" during the process of setting the blade. **Critical Step**	SAT UNSAT
Step 2: The Operator determines the type of metal to be cut and reviews the *Blade Speed Guide*.	SAT UNSAT
Step 3: The Operator opens the pulley guard cover, adjusts speed by moving belt to appropriate pulleys identified in the *Blade Speed Guide*, and then closes and secures the pulley guard cover.	SAT UNSAT
Step 4: The Operator locates A/C power cord and connects to the A/C wall receptacle. The Operator then depresses the green 'ON' button. The machine is energized; the Operator notes the position, the noise and the rotation of the rotary blade.	SAT UNSAT
Step 5: If abnormal noise or vibration occurs the Operator will depress the red 'OFF' button, unplug the machine, apply the administrative control lock and contact the Shop Custodian. Otherwise, the Operator will depress the red 'Off' power button and unplug the machine. [Evaluator, if this step does not apply the Trainee may simulate, credit should otherwise be given for accomplishing this step.] **Critical Step**	SAT UNSAT
	*Initial the result.
TASK PERFORMANCE STEPS:	***SAT/UNSAT**
Task: Apply Safe Engineering Controls and Work Practices While Performing Equipment Setup Subtask [#4: Securely mount the stock and set the blade guard.]	
Step 1: The Operator locates A/C power cord and verifies the power cord is disconnected from the wall receptacle. The Operator will maintain "Plug Control" during the process of mounting the stock and setting the blade guard**. Critical Step**	SAT UNSAT
Step 2: The Operator lifts open the cutting arm and closes the feed rate valve; locking the cutting arm open.	SAT UNSAT
Step 3: The Operator obtains the stock to be cut and places it appropriately in the machine vise ensuring proper tension is applied and that extra stock supports are in place when cutting long stock.	SAT UNSAT
Step 4: The Operator may notice that short lengths of material may not clamp in vise, ensures that the material to be sawed is indeed securely clamped. [**NOTE**: Movable jaw may pivot at screw attachment; Material may only be secured by shimming far side of vise.]	SAT UNSAT
Step 5: The Operator opens the feed rate valve and lowers cutting arm blade (with the machine 'OFF') to just above stock surface and checks the length of cut off portion needed. [Repositions and re-secures in vice if necessary.] **Critical Step**	SAT UNSAT
Step 6: The Operator then adjusts the blade guards so that only the length of blade needed to cut off stock is exposed allowing for the width of the wax stick if it is to be used. **Critical Step**	SAT UNSAT

Step 7: The Operator lifts open the cutting arm and closes the feed rate valve; locking the cutting arm open.	SAT UNSAT
	*Initial the result.
Preparation and Set Up (END)	
Operation (BEGIN)	
TASK PERFORMANCE STEPS:	***SAT/UNSAT**
Task: Apply Safe Engineering Controls and Work Practices While Operating the Equipment Subtask [#5: Cut the initial 'kerf' and set the feed.]	
Step 1: The Operator locates A/C power cord and connects to wall receptacle. The Operator then depresses the green 'ON' button. The machine is energized; the Operator notes the position, the noise and the rotation of the rotary blade.	SAT UNSAT
Step 2: The Operator turns the *Lubricating Fluid Switch* to the 'ON' position (green) or waxes the blade. [The red coolant valve must be opened.]	SAT UNSAT
Step 3: The Operator opens the feed rate valve and slowly lowers the cutting arm blade to begin cutting the "kerf" which aids in maintaining the path of subsequent sawing operation. **Critical Step**	SAT UNSAT
Step 4: The Operator ensures that sufficient pressure is applied to the cutting arm blade so that teeth rub rather than cut and in so doing create excessive wear. [References the *Tell Tale Chips Guide* posted next to the machine] **Critical Step**	SAT UNSAT
Step 5: Once the 'kerf' is established the operator raises the cutting arm blade, shuts the feed rate valve and depresses the red 'Off' button.	SAT UNSAT
Step 6: The Operator then stets the feed rate utilizing the feed rate adjustment knob and the feed rate valve on the feed piston.	SAT UNSAT
	*Initial the result.
TASK PERFORMANCE STEPS:	***SAT/UNSAT**
Task: Apply Safe Engineering Controls and Work Practices While Operating the Equipment Subtask [#6: Cut the stock.]	
Step 1: The Operator locates the green 'ON' button and depresses it. The machine is energized; the Operator notes the position, the noise and the rotation of the rotary blade.	SAT UNSAT
Step 2: The Operator either lubricates the blade with wax or locates the *Lubricating Fluid Switch* on the front panel and places it in the 'ON' position (green).	SAT UNSAT

Step 3: The Operator opens the feed rate valve and the cutting arm begins to advance the blade gently into the stock.	SAT UNSAT
Step 4: The Operator ensures the lubricating system operates properly or applies wax lubricant as necessary during the entire cutting process. **Critical Step**	SAT UNSAT
Step 5: The Operator watches the cutting process and never leaves the process unattended. **Critical Step**	SAT UNSAT
	*Initial the result.
TASK PERFORMANCE STEPS:	***SAT/UNSAT**
Task: Apply Safe Engineering Controls and Work Practices while Powering Down the Equipment Subtask [#7: Power 'OFF' the machine and the coolant mechanism, remove the cut stock.]	
Step 1: The Operator notes completion of the cut and ensures that coolant switch is turned to the 'OFF' position (red).	SAT UNSAT
Step 2: The Operator will depress the 'OFF' button (red), note the position, the noise and the rotation of the rotary blade.	SAT UNSAT
Step 3: The Operator locates the A/C power supply cord, unplugs it from the A/C wall receptacle.	SAT UNSAT
Step 4: The Operator lifts open the cutting arm and closes the feed rate valve; locking the cutting arm open.	SAT UNSAT
Step 5: The Operator removes the stock from the horizontal band saw.	SAT UNSAT
	*Initial the result.
Operation (END)	
Post Operation (BEGIN)	
TASK PERFORMANCE STEPS:	***SAT/UNSAT**
Task: Apply Safe Engineering Controls and Work Practices While Conducting a Safety Inspection Subtask [#8: Work is Complete. Conduct a post-job cursory safety inspection and properly dispose of generated waste.]	
Step 1: The Operator ensures the unit power cord is not connected to the A/C power receptacle,	

the red 'STOP' power button is depressed and the administrative control lock is applied. **Critical Step**	SAT UNSAT
Step 2: The Operator opens the feed rate valve and slowly lowers the cutting arm blade to its 'stored' position.	SAT UNSAT
Step 3: The Operator visually inspects the Horizontal Band Saw for damage, defects, and excessive dust or debris. **Critical Step**	SAT UNSAT
Step 4: If issues are identified in Step 2 such as damage or defects, immediately notify the Shop Custodian. Otherwise, remove the excessive dust and debris and dispose of as per shop rules. **Critical Step**	SAT UNSAT
Step 5: The Operator brushes off the Horizontal Band Saw and cooling collection tray blade, guide supports, etc.	SAT UNSAT
Step 6: The Operator ensures that the Horizontal Band Saw is in a ready use state.	SAT UNSAT
Step 7: The Operator ensures the work area is clear of debris or other hazards, sweeps floor and disposes of chips and excess materials per shop rules.	SAT UNSAT
	*Initial the result.
Post Operation (END)	

Please submit completed OJT packet (Section 3) to the LANSCE Training Office. Include the *Signature Approval* Page on page 26.

TA-53 Horizontal Band Saw Operation OJT Signature Approvals

This form is to be used when the candidate's overall performance and demonstration of knowledge and skills for these tasks were satisfactory.

When the trainee completes the *instructional* portion of this on-the-job training, the **Instructor(s)** must sign off. When the trainee successfully completes all evaluation, the **Evaluator(s)** must sign off. If more than one Instructor or Evaluator is involved, add their names and signatures as appropriate.

Once this *Signature Approval Form* has been signed, please submit to the LANSCE Training Office to authorize the trainee to receive EDS credit.

Trainee Name (print)	**Z#**
Trainee Signature	**Date**
*Your signature indicates that you are confident that you can safely and independently perform this activity.	
Instructor Name (print)	**Z#**
Instructor Signature	**Date**
*Your signature indicates that you are confident that the trainee indicated above has successfully completed training and is qualified to safely and independently perform this activity.	
Evaluator Name (print)	**Z#**
Evaluator Signature	**Date**
*Your signature indicates that you are confident that the trainee indicated above has successfully completed training and is qualified to safely and independently perform this activity.	

For Training Use Only

Course # _____, Section # _____ entered into EDS for credit on _____ by _____.
Date **Initials and Z#**

Unsatisfactory OJT Evaluation with Remediation Steps

The candidate's overall performance and demonstration of knowledge and skills for this task(s) was unsatisfactory. This form is provided to record any errors that the trainee makes that are serious enough to warrant discontinuing a training session. The Instructor/Evaluator must provide specific details of the error, rationale for suspension of training, and/or remediation/retraining plans.

Task # and/or Question #	Reason for Failure	Remediation Steps Taken (Attach Addendum If Necessary)

Course Title: TA-53 Horizontal Band Saw Operation	**Course #:** 56106
Trainee Name (print)	**Z#**
Signature	**Date**
Instructor/Evaluator Name (print)	**Z#**
Signature	**Date**

Submit this form to the LANSCE (Mail Stop H-831) Training Coordinator to file the original in the trainee's training records. In addition, send a copy to all involved Instructors.

Training Package

SME Designation, Instructor/Evaluator Qualification & Authorization, Equivalent Course Credit, and Training Plan Assignment Form

Name:	Z#:	Group:

Subject Matter Expert Qualification Status

☐ Qualified previously as Subject Matter Expert. See individual's training file.

☐ Designated as SME through exception(s). Select one or more exceptions below:

- ☐ Education (please list below specific education for activity)
  -
  -
- ☐ Experience (please list below years performing this activity)
  -
  -
- ☐ Certifications, Licenses, etc. (please list below)
  -
  -

Instructor/Evaluator Authorization

☐ Qualified through training. Review training plan(s), review training records. (Instructors/Evaluators who are qualified to teach the course but are not designated SMEs for this activity.)

☐ Instructor

Printed Name:	Z #:

☐ Evaluator

Printed Name:	Z #:

TSQP OJT Training Verified

Date Training Completed:	Initials:	Z #:

Responsible Line Management Approval

For SME Designation, Instructor/Evaluator Authorization, Training Plan Assignment and Exception Course Credit

Printed Name:	Z#:
Signature:	**Date:**

Course # _____ Session # _____ entered into EDS for credit on _____ by _____.
Date Initials/Z#

TP# _____ added _____ by _____. TP 411 Assigned: _____.
Date Initials/Z# Date Initials/Z#

INSTRUCTOR/EVALUATOR: Submit completed and signed original to the LANSCE Training Office mail stop H-831.

This page intentionally left blank.